

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT(S) : David Szymanski
TITLE : WOOD CUTTING SAW CHAIN AND
REPLACEABLE CUTTING
MEMBERS
APPLICATION NO. : 10/780,323
FILED : 02/17/2004
CONFIRMATION NO. : 1107
EXAMINER : Clark F. Dexter
ART UNIT : 3724
LAST OFFICE ACTION : August 14, 2009
ATTORNEY DOCKET NO. : INDI 2 00002

RESPONSE TO NON-COMPLIANT APPEAL BRIEF

MAIL STOP AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Responsive to the Notice of Non-Compliant Appeal Brief mailed November 23, 2009, on the above-referenced patent application, Applicant(s) hereby submits an amended Appeal Brief, including an amended Table of Contents, Grounds of Rejection, Argument Section, and Claims Appendix.


CONCLUSION

The foregoing submission is believed to meet the requirements of the Notification of Non-Compliant Appeal Brief, and the Applicant awaits further action on the application from the Patent and Trademark Office.

Respectfully submitted,

Fay Sharpe LLP

12/18/2009
Date



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THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE HONORABLE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Application of

David Szymanski

Application No.: 10/780,323

Examiner: Clark F. Dexter

Filed: 02/17/2004

Docket No.: INDI 2 00002

For: **WOOD CUTTING SAW CHAIN AND REPLACEABLE CUTTING
MEMBERS**

BRIEF ON APPEAL

Appeal from Group 3724

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I. REAL PARTY IN INTEREST

The real party in interest for this appeal and the present application is the inventor David Szymanski. The present application is not assigned to, or subject of assignment to any other party.

II. RELATED APPEALS AND INTERFERENCES

Currently, it is believed there are no prior or pending appeals, interferences or judicial proceedings, known to Appellant, Appellant's representative, or the Assignee, that may be related to, or which will directly affect or be directly affected by or have a bearing upon the Board's decision in the pending Appeal.

III. STATUS OF CLAIMS

The status of the claims set forth in the Office Action mailed on February 06, 2008 was, and is, as follows:

Claims 1-3, 5-10, 12-16, 18-20, 23 and 24 are on appeal.

Claims 1-3, 5-27, 29 and 30 are pending.

Claims 1-3, 5-10, 12-16, 18-20, 23 and 24 are rejected.

Claims 4 and 28 have been cancelled.

Claims 11, 17, 21, 22, 25-27, 29 and 30 are withdrawn from consideration.

IV. STATUS OF AMENDMENTS

An Amendment After Final Rejection was filed on November 5, 2008. In an Advisory Action dated April 8, 2009, the Examiner refused to enter the proposed amendments on the grounds that the amendments raise new issues that would require further consideration. A corrected version of the after-final amendment is filed herewith.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The present application is directed toward a quick change cutting link of a saw chain for cutting wood.

Independent claim 1 is directed to a quick change cutting link 12 (Figs. 1, 6, 7 and 8, page 8, line 2) for a saw chain for cutting wood (page 9, lines 1-3) including a base member 16 (Fig. 1, page 8, line 5) adapted to be pivotally connected to other links (page 8, line 3) of the saw chain, which includes a seat surface 26 having a first taper (Fig. 3, page 9, lines 8-9). The quick change cutting link 12 further includes a cutting member (Figs. 2-5, page 9, line 8) that comprises a cutting edge 34 (Fig. 1-3, 6 and 8, page 9, line 15) and releasably engages the base member 16. The cutting member includes a surface 24 having a second taper (Fig. 3, page 9, lines 8-9). The surface 24 having the second taper is constructed from sintered and compacted particles of abrasion resistant material (page 11, lines 17-19), the first taper and said second taper extend at an angle ranging from about 0.5° to about 45° (page 10, line 2) relative to a direction of chain travel at a close tolerance effective to cause self-locking engagement (page 10, lines 3-4) of the first taper of the seat surface 26 and the second taper of said cutting member surface 24.

Independent claim 15 is directed to a quick change cutting link 12 for a saw chain for cutting wood (Figs. 1 and 6-8, page 9, lines 1-3), comprising a base member 16 adapted to be pivotally connected to other links of the saw chain (page 8, line 3), said base member 16 comprising a seat surface 26 (page 9, line 9); and a cutting member (Figs. 2-5, page 9, line 8) that comprises a cutting edge 34 (Fig. 1-3, 6, and 8, page 9, line 15) and releasably engages said seat surface 26 of said base member 16, wherein said cutting member and seat surface 26 each consists essentially of sintered and compacted particles of abrasion resistant material (page 11, lines 11-12).

Independent claim 16 is directed to a quick change cutting member for a saw chain for cutting wood (Figs. 1 and 6-8, page 9, lines 1-3), comprising a cutting edge 34 (Fig. 1-3, 6 and 8, page 9, line 15) and an interior recess 54 (Fig. 5, page 10, lines 15-16) having a surface 60 having a taper extending at an angle ranging from about 0.5° to about 45° relative to a direction of travel of said cutting member when fastened on a chain (page 10, lines 26-17), said taper having a close tolerance comprising no more than 0.5° to a mating taper of a base member 16 (page 10, lines 4-6), wherein said cutting member consists essentially of sintered and compacted particles of abrasion resistant material (page 11, lines 11-12).

Independent claim 18 is directed to a base member 16 of a cutting link 12 for a saw chain for cutting wood (page 8, line 5), said base member being adapted to be pivotally connected to other links of the saw chain (page 8, line 5), said base member 16 comprising a seat surface 26 having a taper (page 9, line 9) extending at an angle ranging from about 0.5° to about 45° relative to a direction of travel of the base member when fastened on the chain (page 10, lines 2-4), said taper having a close tolerance comprising no more than 0.5° to a mating taper of a cutting member (page 10, lines 4-7) wherein said base member 16 consists essentially of sintered and compacted particles of abrasion resistant material (page 11, lines 11-12).

Independent claim 19 is directed to a quick change cutting link 12 for a saw chain for cutting wood (Figs. 1 and 6-8, page 9, lines 1-3), comprising a base member 16 adapted to be pivotally connected to other links of the saw chain (page 8, line 5), said base member 16 comprising a seat surface 26 having a first taper (page 9, line 9) and a stop surface 32 (page 9, line 12) located upstream of said seat surface relative to the direction of travel of the chain; and a cutting member (page 9, line 8) that comprises a cutting edge 34 (Figs. 1-3, 6 and 8, page 9, line 15) and releasably engages said seat surface 26 of said base member 16, said cutting member including a surface 42 having a second taper (Fig. 3, page 9, lines 8-9), wherein said first taper

and said second taper extend at an angle ranging from about 0.5° to about 45° relative to a direction of chain travel (page 10, lines 2-3) at a close tolerance effective to cause locking engagement of said first taper of said seat surface 26 and said second taper of said cutting member surface 24 (page 10, lines 3-7), and said cutting member comprises sintered and compacted particles of abrasion resistant material (page 11, lines 11-12).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The following grounds of rejection are presented for review:

Claims 1-3, 6-9, 12, 15, 18-20, 23 and 24 are rejected as being obvious under 35 U.S.C. §103(a) over one of Wright (U.S. Pat. No. 4,744,278) in view of Funakubo (U.S. Pat. No. 3,800,633).

Claims 1-3, 6-9, 13-16, 18-20, 23 and 24 are rejected under 35 U.S.C. §103(a) as being unpatentable over Raetz (U.S. Pat. No. 3,547,167) in view of Funakubo (U.S. Pat. No. 3,800,633).

Claim 5 is rejected under 35 U.S.C. §103(a) as being unpatentable over the combination of Wright in view of Funakubo or the combination of Raetz in view of Funakubo as applied to claim 1, and further in view of any one of Ackley (U.S. Pat. No. 2,725,083), Abbot (U.S. Patent No. 2,873,775), Oehrli (U.S. Patent No. 3,144,059), Ehlen (U.S. Pat. No. 3,308,859) or Carlton (U.S. Patent No. 4,901,613).

Claim 10 is rejected under 35 U.S.C. §103(a) as being unpatentable over Wright in view of Funakubo or the combination of Raetz in view of Funakubo as applied to claim 1, and further in view of any one of Dawson (U.S. Pat. No. 3,023,490) or Gaddis (U.S. Pat. No. 4,750,396).

VII. ARGUMENT

A. The Rejection of Claims 1-3, 6-9, 12, 15, 18-20, 23 and 24 Over Wright in View of Funakubo is Erroneous

1. Claims 1-3, 6-9, 12, 15, 19-20, 23 and 24 are Patentable Over Wright

Independent claims 1, 15 and 19 are directed to a quick change cutting link for a saw chain for cutting wood including a base member adapted to be pivotally connected to other links of the saw chain, which includes a seat surface having a first taper. The quick change cutting link further includes a cutting member that comprises a cutting edge and releasably engages the base member. The cutting member includes a surface having a second taper and the first taper and said second taper extend at an angle ranging from about 0.5° to about 45° relative to a direction of chain travel at a close tolerance effective to cause self-locking engagement of the first taper of the seat surface and the second taper of said cutting member surface. It is respectfully submitted that Wright does not disclose each and every limitation comprising independent claims 1, 15 and 19.

Particularly, Wright fails to teach a cutting link for a saw chain including a base member adapted to be pivotally connected to other links of the saw chain. According to the Examiner, Wright discloses a base member (clevis) that is “adapted” to be pivotally connected to other links in the saw chain in that it has pivot openings and is capable of being pivotally connected to other structures. Applicant respectfully disagrees with the Examiner’s reasoning. The clevis taught by Wright is attached to the shoulder of a sawplate. The sawplate of a circular saw, by nature does not contain any links. However, even if the sawplate did contain links, the clevis, as taught in Wright, would not be adapted to be pivotally connected to such links. Claims 1, 15 and 19 each recite: “a quick change cutting link of a saw chain for cutting wood comprising a base

member..." Therefore, the base member forms part of a cutting link, the other part being the cutting member. As a link on a saw chain, the base member must contain two connection points, so as to join two other links creating a chain. The base member is pivotally connected to other links allowing the chain to move and bend by pivoting at the connection points. The clevis, as described in Wright, comprises only one connection point; therefore, there is no way for the clevis to be "adapted" to act as a link and pivotally connect to other links on a saw chain, nor is there any suggestion in Wright as to such a construction.

Accordingly, for at least the aforementioned reasons, Applicant/Appellant submits that the Examiner's rejection of independent claims 1, 15 and 19 (along with claims 2-3, 6-9, 12, 20, 23 and 24 that depend therefrom) must be reversed.

2. Claim 18 is Patentable Over Wright

Claim 18 is directed to a base member of a cutting link for a saw chain for cutting wood. The base member is adapted to be pivotally connected to other links of the saw chain and comprises a seat surface having a taper extending at an angle ranging from about 0.5° to about 45° relative to a direction of travel of the base member when fastened on the chain. It is respectfully submitted that Wright fails to teach each of the limitations of independent claim 18.

As discussed more thoroughly above in Section A1, Wright does not teach of a base member of a cutting link for a saw chain for cutting wood. The clevis, as taught in Wright, does not comprise a link, nor does Wright suggest such a construction. Therefore, it is impossible for the clevis to be pivotally connected to other links. It is respectfully submitted that Wright fails to render the subject claim unpatentable. As such, Applicant/Appellant respectfully requests reversal of this rejection.

3. **Funakubo Does Not Make Up For the Deficiencies in Wright**

The Examiner asserts that although Wright lacks the specific material designations for each of the base member and cutting member in claims 1, 6-9, 15, 18 and 19, use of such material on cutting teeth is old and well known in the art. The Examiner uses Funakubo as one example of a disclosure that discusses many of the claimed materials. However, Funakubo fails to cure the aforementioned deficiencies found in Wright with respect to the claims. That is, the Examiner cites Funakubo for teaching the use of sintered and compacted particles of abrasion resistant material. Even assuming the Funakubo discloses the use of such materials in cutting members and even assuming the propriety of combining Funakubo with Wright, such a combination still does not disclose or suggest the claimed invention. Thus, withdrawal of the rejection is respectfully requested.

B. The Rejection of Claims 1-3, 6-9, 13-16, 23 and 24 Over Raetz in view of Funakubo Must be Reversed

1. Claims 1-3, 6-9, 16, 18, 19, 20 and 23-24 are Patentable Over Raetz

Independent claims 1 and 19 (and similarly independent claims 15, 16 and 18) are directed to a quick change cutting link for a saw chain for cutting wood including a base member adapted to be pivotally connected to other links of the saw chain, which includes a seat surface having a first taper. The quick change cutting link further includes a cutting member that comprises a cutting edge and releasably engages the base member. The cutting member includes a surface having a second taper and the first taper and said second taper extend at an angle ranging from about 0.5° to about 45° relative to a direction of chain travel at a close tolerance effective to cause self-locking engagement of the first taper of the seat surface and the second taper of said cutting member surface. It is respectfully submitted that Raetz does not disclose

each and every limitation comprising independent claims 1, 15, 16, 18 and 19 (along with claims 2-3, 6-9, 20 and 23-24 that depend therefrom).

Specifically, Raetz fails to teach a cutting member that includes a surface having a second taper that extends at an angle ranging from about 0.5 degrees to about 45 degrees relative to a direction of chain travel. In col. 2, line 71-72 of Raetz, a cutting sleeve is disclosed having a uniform cross section throughout its entire length. Moreover, col. 3, lines 1-3 teach that the cutting sleeve has a passage with a cross section in the longitudinal direction is rectangular and corresponds to the cross section of the stud. A rectangular cross section certainly does not indicate a tapered surface, since having a taper would result in more of a trapezoidal shape. The Examiner fails to point out any teaching that supports the notion that the cutting sleeve of Raetz discloses a tapered surface. The Examiner only states a disagreement with Applicant/Appellant's conclusion that Raetz fails to disclose a cutting member with tapered surface. See Office Action of 02/06/2008, Response to Arguments, page 15. Applicant/Appellant submits that no such teaching is found in Raetz to support the Examiner's rejection. Accordingly, for at least these reasons, Applicant/Appellant submits that the Examiner's rejection of independent claims 1, 15, 16, 18 and 19 (along with claims 2-3, 6-9, 20 and 23-24 that depend therefrom) must be reversed.

2. Funakubo Does Not Make Up For the Deficiencies in Wright

The Examiner asserts that although Raetz lacks the specific material designations for each of the base member and cutting member in claims 1, 6-9, 15, 16, 18 and 19, use of such material on cutting teeth is old and well known in the art. The Examiner uses Funakubo as one example of a disclosure that discusses many of the claimed materials. However, as indicated above, Raetz does not teach or suggest each element of independent claims 1, 15, 16, 18 and 19.

Funakubo fails to cure the aforementioned deficiencies found in Raetz with respect to the claims. Even providing the Funakubo discloses the use of such materials in cutting members and even assuming the propriety of combining Funakubo with Raetz, such a combination still does not disclose or suggest the claimed invention. Thus withdrawal of the rejection is respectfully requested.

C. The Rejection of Claims 5 and 10 is Erroneous

Claims 5 and 10 are directed to materials for making a base member and a cutting member respectively. Claim 5 is directed to a base member comprising stamped metal. Claim 10 is directed to a cutting member that comprises a tool steel alloy. Both claim 5 and claim 10 alike depend from and include all the limitations of independent claim 1. None of the patents referenced by the Examiner, Ackley (U.S. Pat. No. 2,725,083), Oehrli (U.S. Patent No. 3,144,059), Ehlen (U.S. Pat. No. 3,308,859), Dawson (U.S. Pat. No. 3,023,490) or Gaddis (U.S. Pat. No. 4,750,396), make up for the aforementioned deficiencies of Wright and Raetz. Therefore, the rejection should be reversed.

CONCLUSION

For all of the reasons discussed above, it is respectfully submitted that the rejections are in error and that claims 1-3, 5-10, 12-16, 18-20, 23 and 24 are in condition for allowance. For all of the above reasons, Applicant/Appellant respectfully requests this Honorable Board to reverse the rejections of claims 1-3, 5-10, 12-16, 18-20, 23 and 24.

Respectfully submitted,



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Filed: November 6, 2008

APPENDICES

VIII. CLAIMS APPENDIX

Claims involved in the Appeal are as follows:

LISTING OF THE CLAIMS

1. A quick change cutting link for a saw chain for cutting wood, comprising a base member adapted to be pivotally connected to other links of the saw chain, said base member comprising a seat surface having a first taper; and a cutting member that comprises a cutting edge and releasably engages said base member, said cutting member including a surface having a second taper, said surface having the second taper constructed from sintered and compacted particles of abrasion resistant material, wherein said first taper and said second taper extend at an angle ranging from about 0.5° to about 45° relative to a direction of chain travel at a close tolerance effective to cause self-locking engagement of said first taper of said seat surface and said second taper of said cutting member surface.

2. The quick change cutting link of claim 1 wherein said close tolerance comprises no more than about 1° .

3. The quick change cutting link of claim 1 wherein said close tolerance comprises no more than 0.5° .

5. The quick change cutting link of claim 1 wherein said base member comprises stamped metal.

6. The quick change cutting link of claim 1 wherein said base member comprises sintered and compacted particles of abrasion resistant material.

7. The quick change cutting link of claim 1 wherein said abrasion resistant material comprises at least one of metal and ceramic.

8. The quick change cutting link of claim 7 wherein said abrasion resistant material comprises a carbide containing compound.

9. The quick change cutting link of claim 8 wherein said carbide containing compound comprises a compound selected from the group consisting of tungsten carbide, silicon carbide, tantalum carbide and aluminum carbide.

10. The quick change cutting link of claim 1 wherein said abrasion resistant material comprises a tool steel alloy.

12. The quick change cutting link of claim 1 wherein at least one of said cutting member and said base member comprises a water-resistant material applied by a process selected from the group consisting of steam treatment, resin infiltration, copper infiltration and loctite infiltration.

13. A saw chain comprising a plurality of the quick change cutting links of claim 1.

14. The saw chain of claim 13 wherein said saw chain is adapted for use on a saw comprising one of a chain saw, a timber harvester, a buck saw and a saw for cutting wood pallets.

15. A quick change cutting link for a saw chain for cutting wood, comprising a base member adapted to be pivotally connected to other links of the saw chain, said base member comprising a seat surface; and a cutting member that comprises a cutting edge and releasably engages said seat surface of said base member, wherein said cutting member and seat surface each consists essentially of sintered and compacted particles of abrasion resistant material.

16. A quick change cutting member for a saw chain for cutting wood, comprising a cutting edge and an interior recess having a surface having a taper extending at an angle ranging from about 0.5° to about 45° relative to a direction of travel of said cutting member when

fastened on a chain, said taper having a close tolerance comprising no more than 0.5° to a mating taper of a base member, wherein said cutting member consists essentially of sintered and compacted particles of abrasion resistant material.

18. A base member of a cutting link for a saw chain for cutting wood, said base member being adapted to be pivotally connected to other links of the saw chain, said base member comprising a seat surface having a taper extending at an angle ranging from about 0.5° to about 45° relative to a direction of travel of the base member when fastened on the chain, said taper having a close tolerance comprising no more than 0.5° to a mating taper of a cutting member, wherein said base member consists essentially of sintered and compacted particles of abrasion resistant material.

19. A quick change cutting link for a saw chain for cutting wood, comprising a base member adapted to be pivotally connected to other links of the saw chain, said base member comprising a seat surface having a first taper and a stop surface located upstream of said seat surface relative to the direction of travel of the chain; and a cutting member that comprises a cutting edge and releasably engages said seat surface of said base member, said cutting member including a surface having a second taper, wherein said first taper and said second taper extend at an angle ranging from about 0.5° to about 45° relative to a direction of chain travel at a close tolerance effective to cause locking engagement of said first taper of said seat surface and said second taper of said cutting member surface, and said cutting member comprises sintered and compacted particles of abrasion resistant material.

20. The quick change cutting link of claim 19 wherein said close tolerance comprises no more than 0.5° .

23. The quick change cutting link of claim 19 wherein said first taper and said second taper extend upwardly or downwardly from a location near said cutting edge in a direction opposite to said direction of chain travel.

24. The quick change cutting link of claim 19 wherein said angle is about 10 degrees or less.

IX. EVIDENCE APPENDIX

NONE

X. RELATED PROCEEDINGS APPENDIX

NONE